

**FREY ENVIRONMENTAL, INC.***Environmental Geologists, Engineers, Assessors*

2817 A Lafayette Avenue  
Newport Beach, CA 92663  
(949) 723-1645  
Fax (949) 723-1854  
Email: freyinc@freyinc.com

February 22, 2000  
172-01

Augustine Anijielo  
Regional Water Quality Control Board  
Los Angeles Region  
320 West 4<sup>th</sup> Street, Suite 200  
Los Angeles, California 90013

Re: Groundwater Monitoring Well Sampling  
Former Mondo Chrome Facility  
4933 Firestone Boulevard  
South Gate, California

Dear Mr. Anijielo:

Enclosed please find one copy of a report titled Groundwater Monitoring Well Sampling, Fourth Quarter 1999, Former Mondo Chrome Facility dated February 14, 2000.

As you review the groundwater sample results, note that hexavalent chromium and cadmium have not been detected in any groundwater samples collected and analyzed from the three groundwater monitoring wells associated with the Site. Consequently, FREY Environmental, Inc. (FREY), on behalf of the Kay Companies, requests that groundwater samples no longer be required to be analyzed for hexavalent chromium or cadmium. FREY will not analyze future groundwater samples for hexavalent chromium or cadmium unless instructed to do so.

Please phone me at (949) 723-1645 with any questions or comments.

Sincerely,  
**FREY Environmental, Inc.**



Evan Privett  
Senior Project Geologist

cc: Howard Kay, The Kay Companies

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Augustine Anijielo  
Regional Water Quality Control Board  
Los Angeles Region  
320 West 4<sup>th</sup> Street, Suite 200  
Los Angeles, California 90013

**GROUNDWATER MONITORING WELL SAMPLING  
FOURTH QUARTER 1999  
FORMER MONDO CHROME FACILITY  
4933 FIRESTONE BOULEVARD  
SOUTH GATE, CALIFORNIA**

Dear Mr. Anijielo:

This letter presents the results of groundwater sampling activities for the fourth quarter of 1999 at the site of the former Mondo Chrome facility located at 4933 Firestone Boulevard in South Gate, California (Figure 1).

**SUMMARY OF ACTIVITIES**

On December 20, 1999, groundwater monitoring wells MW1, MW2 and MW3 were measured for depth to water and checked for the presence of light non-aqueous phase liquids (LNAPLs). LNAPLs were not detected in wells MW1, MW2 or MW3 which were then purged and sampled according to the procedures presented in Appendix A.

Groundwater samples were analyzed for purgeable halocarbons and aromatic compounds in general accordance with EPA Method No. 8021B. Groundwater samples were also analyzed for total chromium and cadmium in general accordance with EPA Method No. 200.7 and for hexavalent chromium in general accordance with EPA Method No. 3500.

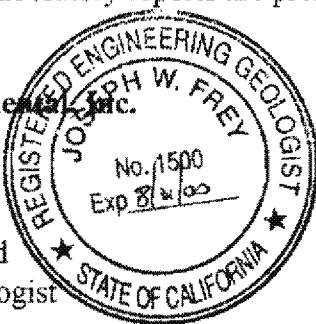
Groundwater purged from the wells is temporarily being stored on-Site in 55-gallon drums. The purged groundwater will be transported and disposed of at a State-certified recycling facility at a later date.

## RESULTS

- Tetrachloroethene (PCE) and trichloroethene (TCE) were detected at concentrations of 395 micrograms per liter ( $\mu\text{g/L}$ ) and 635  $\mu\text{g/L}$ , respectively, in the water sample collected from well MW1. In addition, 1,1-dichloroethene (1,1-DCE) and cis-1,2-dichloroethene (cis-1,2-DCE) were detected at concentrations of 10.0  $\mu\text{g/L}$  and 1.6  $\mu\text{g/L}$ , respectively, in the water sample collected from well MW-1. No other compounds analyzed as part of EPA Method No. 8021B were detected in the groundwater sample collected from MW1.
- PCE , TCE and cis-1,2-DCE were detected at concentrations of 27  $\mu\text{g/L}$ , 158  $\mu\text{g/L}$  and 18  $\mu\text{g/L}$ , respectively, in the groundwater sample collected from well MW2. No other compounds analyzed as part of EPA Method No. 8021B were detected in the groundwater sample collected from MW2.
- PCE, TCE and cis-1,2-DCE were detected at concentrations of 4.4  $\mu\text{g/L}$ , 43  $\mu\text{g/L}$  and 3.6  $\mu\text{g/L}$ , respectively, in the groundwater sample collected from well MW3. No other compounds analyzed as part of EPA Method No. 8021B were detected in the groundwater sample collected from MW3.
- Total chromium was detected at concentrations ranging from 0.018 milligrams per liter (mg/L) to 0.037 mg/L in groundwater samples collected from MW1, MW2 and MW3.
- Hexavalent chromium and cadmium were not detected above the laboratory detection limits of 0.02 mg/L and 0.004 mg/L, respectively, in groundwater samples MW1, MW2 or MW3.
- Groundwater was estimated to flow toward the southeast at a gradient of 0.00046 feet per foot on December 20, 1999. A site sketch showing groundwater elevations and estimated direction of groundwater flow on December 20, 1999 is presented on Figure 2.
- Calculated groundwater elevations and chemical analytical data have been summarized in Table 1. Laboratory reports are presented in Appendix B.

Sincerely,  
**FREY Environmental Inc.**

  
 Joe Frey  
 Principal Certified  
 Engineering Geologist  
 CEG #1500



  
 Evan Privett  
 Senior Project Geologist

Enclosures:

Table 1 - Groundwater Levels and Chemical Analyses

Figure 1 - Site Location Map

Figure 2 - Site Sketch Showing Groundwater Elevations and Estimated Groundwater Flow Direction  
on December 20, 1999.

Appendix A - Field Procedures

Appendix B- Laboratory Results

cc: Mr. Howard Kay  
The Kay Companies  
475 Seventeenth Street  
Suite 940  
Denver, CO 80202

**TABLE**

**TABLE 1**  
**GROUNDWATER LEVELS AND CHEMICAL ANALYSES**  
**FORMER MONDO CHROME FACILITY**  
**4933 FIRESTONE BOULEVARD**  
**SOUTH GATE, CALIFORNIA**

Well No.	Well Elevation (ft-msl)	Screen Interval (feet-bgs)	Date Sampled	Depth to Groundwater (feet)	Groundwater Elevation (ft-msl)	PCE ug/l (ppb)	TCE ug/l (ppb)	cis-1,2-DCE ug/l (ppb)	1,1-DCE ug/l (ppb)	Vinyl Chloride ug/l (ppb)	1,2-DCA ug/l (ppb)	Chromium mg/l (ppb)	Chromium VI mg/l (ppb)	Cadmium mg/l (ppb)
MW1	109.40	30-55	12/07/98	41.58	67.82	110	140	6.8	ND>1			NA	NA	NA
			03/03/99	40.71	68.69	140	190	ND>10	ND>16	ND>20	ND>10	0.019	ND>0.02	ND>0.004
			06/24/99	40.36	69.04	600	780	ND>25	ND>40	ND>50	ND>25	0.019	ND>0.02	ND>0.004
			09/17/99	40.31	69.09	707	824	9.4	1.9	1.9	ND>0.5	0.016	ND>0.02	ND>0.004
			12/20/99	40.35	69.05	395	635	10	1.6	ND>1.0	ND>0.5	0.037	ND>0.02	ND>0.003
MW2	109.45	30-55	12/07/98	41.68	67.77	11	77	16	ND>1			NA	NA	NA
			03/03/99	40.81	68.64	6.5	130	13	ND>4	ND>5	ND>2.5	0.033	ND>0.02	ND>0.004
			06/24/99	40.45	69.00	20	160	13	ND>8	ND>10	ND>5	0.050	ND>0.02	ND>0.004
			09/17/99	40.40	69.05	15	156	21	ND>0.8	ND>1	ND>0.5	0.040	ND>0.02	ND>0.004
			12/20/99	40.43	69.02	27	158	18	ND>0.8	ND>1.0	ND>0.5	0.018	ND>0.02	ND>0.003
MW3	109.61	30-55	12/07/98	41.78	67.83	9.3	75	10	1.7			NA	NA	NA
			03/03/99	40.94	68.67	5.1	100	6.4	ND>4	ND>5	ND>2.5	0.068	ND>0.02	ND>0.004
			06/24/99	40.59	69.02	7.4	110	7.3	ND>8	ND>10	ND>5	0.050	ND>0.02	ND>0.004
			09/17/99	40.56	69.05	6.1	145	12	1.2	2.3	1.2	0.058	ND>0.02	ND>0.004
			12/20/99	40.61	69.00	4.4	43	3.6	ND>0.8	ND>1.0	ND>0.5	0.037	ND>0.02	ND>0.003
DTSC MCLs						5	5	6	6	0.5	0.5	50	NA	5

## Notes

1) Well elevation recorded at top of casing

2) PCE = Tetrachloroethene

3) TCE = Trichloroethene

4) cis 1,2-DCE = cis 1,2 Dichloroethene

5) 1,1-DCE = 1,1 Dichloroethene

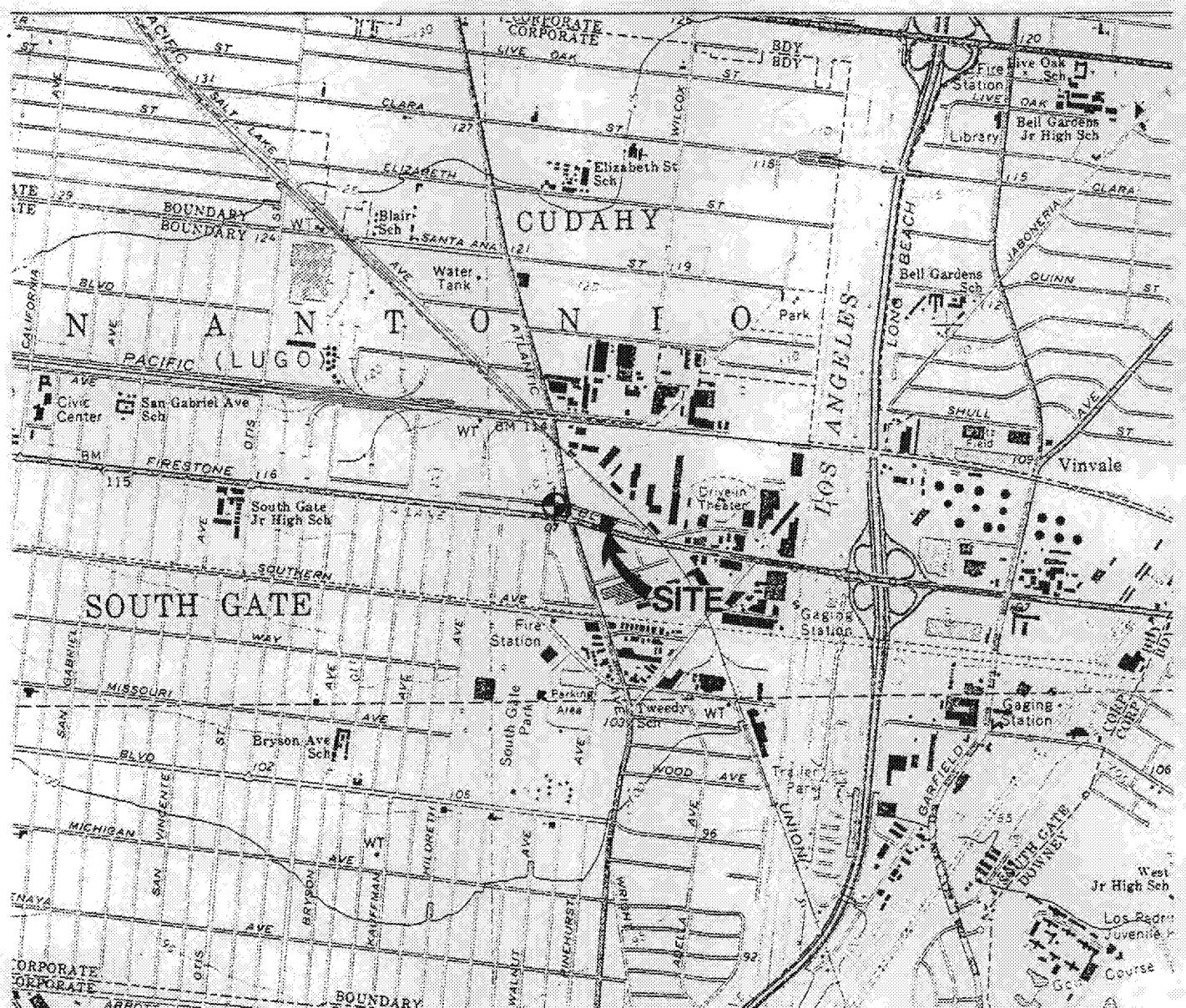
### 6) 1,2-DCA ≈ 1,2 Dichloroethane

7) Maximum Contaminant Levels (MCLs) are enforceable drinking water standards

8) ND> - Constituent not detected above the stated concentration

9) NA - Not applicable

## **FIGURES**



### EXPLANATION

◆ Groundwater well UNOCAL property

MW1 Well number

(53') Depth to groundwater in feet MSL  
(1994)

FORMER MONDO CHROME FACILITY  
4933 FIRESTONE BOULEVARD  
SOUTH GATE, CALIFORNIA

Client: TEDESCO LEASING

Project No.: 172-01

### NOTES:

- 1) All locations and dimensions are approximate.
- 2) Base map from USGS 7.5 minute South Gate (1966, photorevised 1981), California topographic quadrangle.
- 3) Groundwater well data from FUGRO West, Inc., project no. 94-48-1320.

**FREY ENVIRONMENTAL, INC.**

### SITE LOCATION MAP

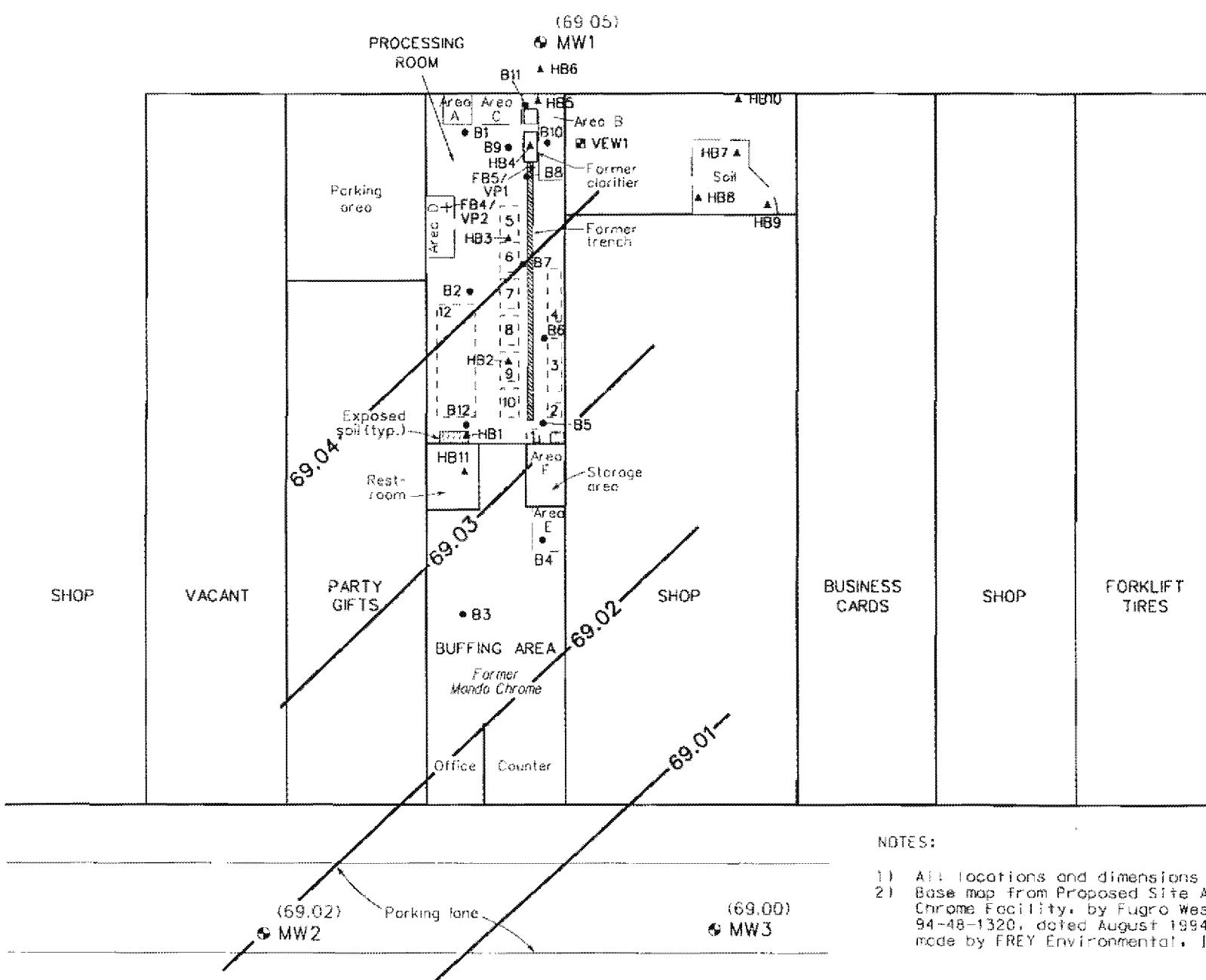
Date: JANUARY 1996

Figure: 1

## EXPLANATION

- ▲ HB6 HAND AUGER BORING LOCATION
- B11 BORING LOCATION
- VEW1 VAPOR EXTRACTION WELL LOCATION
- + FB4/ VP2 SOIL SAMPLE LOCATION/VAPOR PROBE LOCATION
- MW3 GROUNDWATER MONITORING WELL LOCATION
- (69.00) With groundwater elevation in feet MSL,  
on December 20, 1999
- 69.01 CONTOUR OF EQUAL GROUNDWATER ELEVATION  
in feet MSL, on December 20, 1999
- ESTIMATED GROUNDWATER FLOW DIRECTION

### MASON STREET



**APPENDIX A**

**FIELD PROCEDURES/WATER SAMPLING DATA FORMS**

## **WELL PURGING AND GROUND WATER SAMPLING**

1. The water level, and depth to the bottom of each well, was recorded using a conductance probe prior to well purging. A clear bailer sample was taken and visually inspected for turbidity and the presence of free product.
2. The groundwater monitoring wells were purged of at least three well volumes using a submersible pump or bailer.
3. The well was allowed to recover to at least 80 percent of its original well volume prior to sampling.
4. The ground water samples were collected using a stainless steel bailer held by dedicated nylon line.
5. All items entering the well; tapes, conductance probe, bailers were cleaned prior to use and between sampling periods.
6. Groundwater collected from each monitoring well was placed into EPA approved, zero head space, 40 milliliters (mL) vials, 250 mL and 500 mL containers.
7. Each sample was labeled.
8. The samples were placed in a bag, and into an ice chest, and cooled following collection.
9. The samples were delivered to the laboratory directly after collection. Sample handling, transport, and delivery to the laboratory were documented using chain of custody procedures and appropriate Chain-of-Custody forms.

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227      12/20/92

JCS NC. 172-81

**SAMPLING PERSONNEL**

Nelson

WELL NUMBER <b>MW3</b>	Well Diameter (in) <b>2"</b>	Reference Point <b>TOL</b>
WATER DEPTH (ft) <b>40.61</b>	WELL DEPTH <b>53.20</b>	Feet of -2G in Well <b>12.57</b>

SAMPLE DEPTH (FT)	PURGE METHOD	PURGE PUMPING RATE (GPM)
41.06	METHCO ball	

FIELD EQUIPMENT	ITEM NUMBER	MODEL NAME/DESCRIPTION
Ort Meter/EC Meter		#5
Turbidity Meter		—
Pump (G.P.H. Flow)		2"
Water Level Meter		E1
Boiler Glass (length)		1-65" x 36' SS

### WELL VOLUME CALCULATIONS.

(Water Column Thickness Multiplier) = One Well Volume in Gallons

4-NC14 WELL: (        ) % < 0.50) =        Gaiter

3. Used volumes = \_\_\_\_\_ Gallons

1-HCS WELL 1 12.5' 30 x 30' = 2.01 Gallons

7 West Vassar = 1 Galon

FREY ENVIRONMENTAL, INC.

## GROUNDWATER SAMPLING DATA

Page \_\_\_\_\_ of \_\_\_\_\_

SITE NAME Mondes Creek

DATE 17/20

JOB NO. 172-0

**SAMPLING PERSONNEL**

11

WELL NUMBER <u>MW2</u>	Well Diameter (ID) 2"	Reference Point <u>TOL</u>
WATER DEPTH (ft) <u>40.43</u>	WELL DEPTH <u>53.00</u>	Feet of H2O in Well <u>12.57</u>

SAMPLE DEPTH (FT)	PURGE METHOD	PURGE PUMPING RATE (GPM)
40.50	Bwl	/

FIELD EQUIPMENT	MODEL NAME/ DESCRIPTION
pH Meter/EC Meter	# 5
Turbidity Meter	-
Pump (Dia./Type)	2"
Water Level Meter	# 1
Bailer (Dia.x length)	1.65" x 36" SS

SAMPLE NUMBER		5 BOTTLES
mW2	3009	
mW2	2 12 021	

## WELL VOLUME CALCULATIONS:

(Water Column Thickness) (Multiplier) = One Well Volume in Gallons

**4-INCH WELL:** ( \_\_\_\_\_ ft) x (0.65) = \_\_\_\_\_ Gallons

3 Well Volumes = \_\_\_\_\_ Gallons

2-INCH WELL: ( 12.57 FT x 0.16 = 2.01 Gallons

3 Well Volumes = 1 Gallons

JOB NO. 172-01

## SAMPLING PERSONNEL

Nelson

WELL NUMBER MW1	Well Diameter (in) 2"	Reference Point TOC
WATER DEPTH (ft) 40.35	WELL DEPTH 54.40	Feet at -20' in Well 14.05

ELAPSED TIME	GALLONS PURGED	Temp (deg. F)	Comments
142			start br
151	2	73.6	530
201	4.5	73.4	520
218	6.6	73.5	520
225		75.4	610
TOTAL GALLONS PURGED			

SAMPLE DEPTH (FT) 40.65	PURGE METHOD brf	PURGE PUMPING RATE (GPM)
-------------------------------	------------------------	-----------------------------

TEST EQUIPMENT	MCID NAME/DESCRIPTION
3rd Waterfall Meter	#5
Turbidity Meter	-
Pump/Clean Tools	-
Water Level Meter	#1
Bailer/Clean Tools	1.65 x 36" SS

SAMPLE NUMBER	BOTTLES
MW1	3 VOL
MW1	2 1/2 PINTS

## WELL VOLUME CALCULATIONS

(Water Column Thickness) (Radius) = One Well Volume in Gallons

4-INCH WELL:  $\pi \times 0.5^2 =$  Gallons

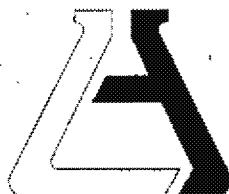
3 Well Volumes = Gallons

2-INCH WELL:  $\pi \times 0.16^2 =$  Gallons

2 Well Volumes = Gallons

**APPENDIX B**

**LABORATORY RESULTS**

**ASSOCIATED LABORATORIES**

806 North Batavia - Orange, California 92868 - 714/771-6900

FAX 714/538-1209

CLIENT Frey Environmental, Inc. (7741)  
ATTN: Evan Privett  
2817A Lafayette Ave.  
Newport Beach, CA 92663

LAB REQUEST 46445  
REPORTED 01/07/2000  
RECEIVED 12/20/1999

PROJECT Mondo Crome 172-01

SUBMITTER Client

COMMENTS

This laboratory request covers the following listed samples which were analyzed for the parameters indicated on the attached Analytical Result Report. All analyses were conducted using the appropriate methods as indicated on the report. This cover letter is an integral part of the final report.

<u>Order No.</u>	<u>Client Sample Identification</u>
157947	MW1
157948	MW1-W1
157949	MW1-W2
157950	MW2
157951	MW2-W1
157952	MW2-W2
157953	MW3
157954	MW3-W1
157955	MW3-W2

Thank you for the opportunity to be of service to your company. Please feel free to call if there are any questions regarding this report or if we can be of further service.

ASSOCIATED LABORATORIES by,

Edward S. Behare, Ph.D.  
Vice President

*NOTE: Unless notified in writing, all samples will be discarded by appropriate disposal protocol 30 days from date reported.*

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permission. This is for the mutual protection of the public, our clients, and ourselves.

TESTING & CONSULTING  
Chemical  
Microbiological  
Environmental

Order #: 157947

Matrix: WATER

Date Sampled: 12/20/1999

Time Sampled:

Sampled By:

Client: Frey Environmental, Inc.

Client Sample ID: MW1

**Analyte****Result DF DLR Units Date/Analyst****8021B/HVO Halogenated Volatile Organics**

1,1,1-Trichloroethane	ND	1	0.5	ug/L	12/29/99	DC
1,1,2,2-Tetrachloroethane	ND	1	0.5	ug/L	12/29/99	DC
1,1,2-Trichloroethane	ND	1	0.5	ug/L	12/29/99	DC
1,1-Dichloroethane	ND	1	0.8	ug/L	12/29/99	DC
1,1-Dichloroethene	1.6	1	0.8	ug/L	12/29/99	DC
1,2-Dibromoethane	ND	1	1.0	ug/L	12/29/99	DC
1,2-Dichlorobenzene	ND	1	1.0	ug/L	12/29/99	DC
1,2-Dichloroethane	ND	1	0.5	ug/L	12/29/99	DC
1,2-Dichloropropane	ND	1	0.5	ug/L	12/29/99	DC
1,3-Dichlorobenzene	ND	1	2.0	ug/L	12/29/99	DC
1,4-Dichlorobenzene	ND	1	1.0	ug/L	12/29/99	DC
2-Chloroethylvinyl ether	ND	1	0.7	ug/L	12/29/99	DC
Bromoform	ND	1	0.5	ug/L	12/29/99	DC
Bromomethane	ND	1	1.0	ug/L	12/29/99	DC
Carbon tetrachloride	ND	1	0.7	ug/L	12/29/99	DC
Chlorobenzene	ND	1	1.0	ug/L	12/29/99	DC
Chloroethane	ND	1	0.5	ug/L	12/29/99	DC
Chloroform	ND	1	0.3	ug/L	12/29/99	DC
Chloromethane	ND	1	1.0	ug/L	12/29/99	DC
Dibromochloromethane	ND	1	0.5	ug/L	12/29/99	DC
Dichlorobromomethane	ND	1	0.5	ug/L	12/29/99	DC
Dichlorodifluoromethane	ND	1	2.0	ug/L	12/29/99	DC
Methylene Chloride	ND	1	1.0	ug/L	12/29/99	DC
Tetrachloroethene	393	10	5.0	ug/L	12/29/99	DC
Trichloroethene	633	10	6.0	ug/L	12/29/99	DC
Trichlorofluoromethane	ND	1	0.5	ug/L	12/29/99	DC
Vinyl chloride	ND	1	1.0	ug/L	12/29/99	DC
cis-1,2-Dichloroethene	10	1	0.5	ug/L	12/29/99	DC
cis-1,3-Dichloropropene	ND	1	1.5	ug/L	12/29/99	DC
trans-1,2-Dichloroethene	ND	1	0.8	ug/L	12/29/99	DC
trans-1,3-Dichloropropene	ND	1	1.5	ug/L	12/29/99	DC

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor



Order #: 157948

Matrix: WATER

Date Sampled: 12/20/1999

Time Sampled:

Sampled By:

Client: Frey Environmental, Inc.

Client Sample ID: MW1-W1

Analyte	Result	DF	DLR	Units	Date/Analyst
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3500Cr-D Chromium, Hexavalent

Chromium, Hexavalent	ND	1	0.02	mg/L	12/21/99	LN
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DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor



Order #: 157949

Client: Frey Environmental, Inc.

Matrix: WATER

Client Sample ID: MW1-W2

Date Sampled: 12/20/1999

Time Sampled:

Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst
<b>200.7 ICP Total Metals - Water Only</b>					
Cadmium	ND	1	0.003	mg/L	12/22/99 MT
Chromium	0.037	1	0.003	mg/L	12/22/99 MT

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor



Order #: 157950

Client: Frey Environmental, Inc.

Matrix: WATER

Client Sample ID: MW2

Date Sampled: 12/20/1999

Time Sampled:

Sampled By:

**Analyte****Result DF DLR Units Date/Analyst****8021B/HVO Halogenated Volatile Organics**

1,1,1-Trichloroethane	ND	1	0.5	ug/L	12/29/99	DC
1,1,2,2-Tetrachloroethane	ND	1	0.5	ug/L	12/29/99	DC
1,1,2-Trichloroethane	ND	1	0.5	ug/L	12/29/99	DC
1,1-Dichloroethane	ND	1	0.8	ug/L	12/29/99	DC
1,1-Dichloroethene	ND	1	0.8	ug/L	12/29/99	DC
1,2-Dibromoethane	ND	1	1.0	ug/L	12/29/99	DC
1,2-Dichlorobenzene	ND	1	1.0	ug/L	12/29/99	DC
1,2-Dichloroethane	ND	1	0.5	ug/L	12/29/99	DC
1,2-Dichloropropane	ND	1	0.5	ug/L	12/29/99	DC
1,3-Dichlorobenzene	ND	1	2.0	ug/L	12/29/99	DC
1,4-Dichlorobenzene	ND	1	1.0	ug/L	12/29/99	DC
2-Chloroethylvinyl ether	ND	1	0.7	ug/L	12/29/99	DC
Bromoform	ND	1	0.5	ug/L	12/29/99	DC
Bromomethane	ND	1	1.0	ug/L	12/29/99	DC
Carbon tetrachloride	ND	1	0.7	ug/L	12/29/99	DC
Chlorobenzene	ND	1	1.0	ug/L	12/29/99	DC
Chloroethane	ND	1	0.5	ug/L	12/29/99	DC
Chloroform	ND	1	0.5	ug/L	12/29/99	DC
Chloromethane	ND	1	1.0	ug/L	12/29/99	DC
Dibromochloromethane	ND	1	0.5	ug/L	12/29/99	DC
Dichlorobromomethane	ND	1	0.5	ug/L	12/29/99	DC
Dichlorodifluoromethane	ND	1	2.0	ug/L	12/29/99	DC
Methylene Chloride	ND	1	1.0	ug/L	12/29/99	DC
Tetrachloroethene	27	1	0.5	ug/L	12/29/99	DC
Trichloroethene	158	5	3.0	ug/L	12/29/99	DC
Trichlorofluoromethane	ND	1	0.5	ug/L	12/29/99	DC
Vinyl chloride	ND	1	1.0	ug/L	12/29/99	DC
cis-1,2-Dichloroethene	18	1	0.5	ug/L	12/29/99	DC
cis-1,3-Dichloropropene	ND	1	1.5	ug/L	12/29/99	DC
trans-1,2-Dichloroethene	ND	1	0.8	ug/L	12/29/99	DC
trans-1,3-Dichloropropene	ND	1	1.5	ug/L	12/29/99	DC

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor



Order #: 157951

Matrix: WATER

Date Sampled: 12/20/1999

Time Sampled:

Sampled By:

Client: Frey Environmental, Inc.

Client Sample ID: MW2-W1

Analyte	Result	DF	DLR	Units	Date/Analyst
---------	--------	----	-----	-------	--------------

3500Cr-D Chromium, Hexavalent

Chromium, Hexavalent	ND	1	0.02	mg/L	12/21/99	EN
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DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor



Order #: 157952

Matrix: WATER

Date Sampled: 12/20/1999

Time Sampled:

Sampled By:

Client: Frey Environmental, Inc.

Client Sample ID: MW2-W2

Analyte	Result	DF	DLR	Units	Date/Analyst
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200.7 ICP Total Metals - Water Only

Cadmium	ND	1	0.003	mg/L	12/22/99	MT
Chromium	0.018	1	0.003	mg/L	12/22/99	MT

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor



Order #: 157953

Matrix: WATER

Date Sampled: 12/20/1999

Time Sampled:

Sampled By:

Client: Frey Environmental, Inc.

Client Sample ID: MW3

**Analyte****Result DF DLR Units Date/Analyst**8021B/HVO Halogenated Volatile Organics

1,1,1-Trichloroethane	ND	1	0.5	ug/L	12/29/99	DC
1,1,2,2-Tetrachloroethane	ND	1	0.5	ug/L	12/29/99	DC
1,1,2-Trichloroethane	ND	1	0.5	ug/L	12/29/99	DC
1,1-Dichloroethane	ND	1	0.8	ug/L	12/29/99	DC
1,1-Dichloroethene	ND	1	0.8	ug/L	12/29/99	DC
1,2-Dibromoethane	ND	1	1.0	ug/L	12/29/99	DC
1,2-Dichlorobenzene	ND	1	1.0	ug/L	12/29/99	DC
1,2-Dichloroethane	ND	1	0.5	ug/L	12/29/99	DC
1,2-Dichloropropane	ND	1	0.5	ug/L	12/29/99	DC
1,3-Dichlorobenzene	ND	1	2.0	ug/L	12/29/99	DC
1,4-Dichlorobenzene	ND	1	1.0	ug/L	12/29/99	DC
2-Chloroethylvinyl ether	ND	1	0.7	ug/L	12/29/99	DC
Bromoform	ND	1	0.5	ug/L	12/29/99	DC
Bromomethane	ND	1	1.0	ug/L	12/29/99	DC
Carbon tetrachloride	ND	1	0.7	ug/L	12/29/99	DC
Chlorobenzene	ND	1	1.0	ug/L	12/29/99	DC
Chloroethane	ND	1	0.5	ug/L	12/29/99	DC
Chloroform	ND	1	0.5	ug/L	12/29/99	DC
Chloromethane	ND	1	1.0	ug/L	12/29/99	DC
Dibromochloromethane	ND	1	0.5	ug/L	12/29/99	DC
Dichlorobromomethane	ND	1	0.5	ug/L	12/29/99	DC
Dichlorodifluoromethane	ND	1	2.0	ug/L	12/29/99	DC
Methylene Chloride	ND	1	1.0	ug/L	12/29/99	DC
Tetrachloroethene	4.4	1	0.5	ug/L	12/29/99	DC
Trichloroethene	43	1	0.6	ug/L	12/29/99	DC
Trichlorofluoromethane	ND	1	0.5	ug/L	12/29/99	DC
Vinyl chloride	ND	1	1.0	ug/L	12/29/99	DC
cis-1,2-Dichloroethene	3.6	1	0.5	ug/L	12/29/99	DC
cis-1,3-Dichloropropene	ND	1	1.5	ug/L	12/29/99	DC
trans-1,2-Dichloroethene	ND	1	0.8	ug/L	12/29/99	DC
trans-1,3-Dichloropropene	ND	1	1.5	ug/L	12/29/99	DC

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor



Order #: 157954

Matrix: WATER

Date Sampled: 12/20/1999

Time Sampled:

Sampled By:

Client: Frey Environmental, Inc.

Client Sample ID: MW3-W1

Analyte	Result	DF	DLR	Units	Date/Analyst
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3500Cr-D Chromium, Hexavalent

Chromium, Hexavalent	ND	1	0.02	mg/L	12/21/99	LN
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DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor



Order #: 157955

Matrix: WATER

Date Sampled: 12/20/1999

Time Sampled:

Sampled By:

Client: Frey Environmental, Inc.

Client Sample ID: MW3-W2

Analyte	Result	DF	DLR	Units	Date/Analyst
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**200.7 ICP Total Metals - Water Only**

Cadmium	ND	T	0.003	mg/L	12/22/99	MT
Chromium	0.037	I	0.003	mg/L	12/22/99	MT

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor



# ASSOCIATED LABORATORIES

## *QA REPORT FORM (MS/MSD)*

QC Sample: LR 46328 - 157408  
 Matrix: WATER  
 Prep. Date: 12/22/99  
 Analysis Date: 12/22/99  
 Lab ID#'s in Batch: LR 46328, 46373, 46309, 46313, 46441, 46445, 46388, 46454, 46455, 46325, 46326, 46329

### MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULT

REPORTING UNITS = mg/L

TEST	Method	Sample Result	ND	Spike Added	Matrix Spike	Matrix Spike Dup	% Rec MS	% Rec MSD	RPD
Arsenic	200.7	0.003	U	0.1	0.102	0.103	102.0	103.0	1.0
Selenium	200.7	0.004	U	0.1	0.102	0.103	102.0	103.0	1.0
Thallium	200.7	0.003	U	0.1	0.094	0.093	94.0	93.0	1.1
Lead	200.7	0.010		0.2	0.211	0.211	100.5	100.5	0.0
Antimony	200.7	0.030	U	1.0	0.938	0.909	93.8	90.9	3.1
Barium	200.7	0.016		1.0	0.986	0.994	97.0	97.8	0.8
Beryllium	200.7	0.001	U	1.0	0.945	0.961	94.5	96.1	1.7
Cadmium	200.7	0.004	U	1.0	1.030	1.030	103.0	103.0	0.0
Chromium	200.7	0.064		1.0	0.983	1.000	91.9	93.6	1.7
Cobalt	200.7	0.005	U	1.0	0.937	0.947	93.7	94.7	1.1
Copper	200.7	0.034		1.0	1.070	1.080	103.6	104.6	0.9
Molybdenum	200.7	0.010	U	1.0	0.949	0.965	94.9	96.5	1.7
Nickel	200.7	0.028		1.0	0.976	0.999	94.8	97.1	2.3
Vanadium	200.7	0.005	U	1.0	0.930	0.948	93.0	94.8	1.9
Zinc	200.7	0.267		1.0	1.240	1.260	97.3	99.3	1.6
Silver	200.7	0.005	U	0.4	0.338	0.344	84.5	86.0	1.8
Aluminum	200.7	0.393		1.0	1.240	1.200	84.7	80.7	3.3
Iron	200.7	0.716		1.0	1.510	1.530	79.4	81.4	1.3
Manganese	200.7	0.023		1.0	0.938	0.962	91.5	93.9	2.5
Boron	200.7	0.017		1.0	0.918	0.918	90.1	90.1	0.0

NC = Not Calculated

ND = "U" - Not Detected

RPD = Relative Percent Difference of Matrix Spike and Matrix Spike Duplicate

%REC-MS&MSD = Percent Recovery of Matrix Spike & Matrix Spike Duplicate

% REC LIMITS = 75 - 125
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RPD LIMITS = 20
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**ASSOCIATED LABORATORIES**  
*QA REPORT FORM*

QC Sample: LR 46445 - 157954  
 Matrix: WATER  
 Prep. Date: 12/21/99  
 Analysis Date: 12/21/99  
 ID#'s in Batch: LR 46445

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**MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULT**

Reporting Units = mg/L

Test	Method	Sample Result	Spike Added	Matrix Spike	Matrix Spike Dup	%Rec MS	%Rec MSD	RPD
Cr+6	3500Cr D	ND	1.00	0.92	0.93	92.0	93.0	1.1

*ND = Not Detected*

*RPD = Relative Percent Difference of Matrix Spike and Matrix Spike Duplicate*

*%REC-MS & MSD = Percent Recovery of Matrix Spike & Matrix Spike Duplicate*

**%REC LIMITS = 70 - 130**

**RPD LIMITS = 30**

**PREPARATION BLANK / LAB CONTROL SAMPLE RESULTS**

PREP BLK	LCS					
	Value	Result	True	%Rec	L.Limit	H.Limit
	ND	0.5	0.5	100	80%	120%

*Value = Preparation Blank Value*

*LCS Result = Lab Control Sample Result*

*True = True Value of LCS*

*L.Limit / H.Limit = LCS Control Limits*

**ASSOCIATED LABORATORIES**  
*QA REPORT FORM*

QC Sample: LFB 122999

Matrix: WATER

Analysis Date: 12/29/99

ID#'s in Batch: LR 46433, 46389, 46445, 46470, 46367, 46507, 46508, 46357, 46558, 46526, 46502

**MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULT**

Reporting Units = ug/L

Test	Method	Sample Result	Spike Added	Matrix Spike	Matrix Spike Dup	%Rec MS	%Rec MSD	RPD	Prep. Blank
1,1-Dichloroethane	8021	ND	10	10.838	10.958	108	110	1	ND
Methylene chloride	8021	ND	10	9.602	9.312	96	93	3	ND
trans-1,2-Dichloroethene	8021	ND	10	10.228	10.700	102	107	5	ND
1,1,1-Trichloroethane	8021	ND	10	9.574	9.800	96	98	2	ND
Carbon Tetrachloride	8021	ND	10	9.510	9.908	95	99	4	ND
cis-1,3-Dichloropropene	8021	ND	10	7.900	7.820	79	78	1	ND
Trichloroethene	8021	ND	10	10.466	10.588	93	106	1	ND
trans-1,3-Dichloropropene	8021	ND	10	7.892	7.928	79	79	0	ND
Chlorobenzene	8021	ND	10	8.936	8.926	90	89	0	ND
1,3-Dichlorobenzene	8021	ND	10	9.870	10.408	99	104	5	ND
1,4-Dichlorobenzene	8021	ND	10	9.792	10.540	98	105	7	ND
1,2-Dichlorobenzene	8021	ND	10	9.064	9.962	91	100	9	ND

ND = Not Detected

RPD = Relative Percent Difference of Matrix Spike and Matrix Spike Duplicate

%REC-MS & MSD = Percent Recovery of Matrix Spike & Matrix Spike Duplicate

%REC LIMITS: 65-135

RPD LIMITS: 35

**LCS RECOVERY / METHOD BLANK**

Test	Spike Added	LCS Results	LCS % Rec	Limits % Rec
1,1-Dichloroethane	10	10.6	106	80-120
Methylene Chloride	10	8.9	89	80-120
trans-1,2-Dichloroethene	10	9.8	98	80-120
1,1,1-Trichloroethane	10	9.0	90	80-120
Carbon Tetrachloride	10	9.1	91	80-120
cis-1,3-Dichloropropene	10	8.3	83	80-120
Trichloroethene	10	9.8	98	80-120
trans-1,3-Dichloropropene	10	8.0	80	80-120
Chlorobenzene	10	8.1	81	80-120
1,3-Dichlorobenzene	10	11.3	113	80-120
1,4-Dichlorobenzene	10	10.9	109	80-120
1,2-Dichlorobenzene	10	10.5	105	80-120

Method Blank = All ND



## ASSOCIATED LABORATORIES

806 N. Batavia • Orange, CA 92886  
 (714) 771-6900 • FAX: (714) 538-1209

## CHAIN OF CUSTODY RECORD

Date 2-20-99 Page of

CLIENT <b>FREY ENVIRONMENTAL, INC.</b>		PROJECT MANAGER <b>EVAN PRIVETT</b>		Samples Intact Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
ADDRESS <b>2517 A LAFAYETTE AVE NEWPORT BEACH, CA 92663</b>		PHONE NUMBER <b>949-723-1645</b>		County Seals Intact Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
PROJECT NAME <b>Mondo Crom 172-01</b>		SAMPLERS: (Signature) <b>J. M.</b>		Sample Ambient <input type="checkbox"/> Cooled <input type="checkbox"/> Frozen <input checked="" type="checkbox"/>	
				Same Day <input type="checkbox"/> 24 Hr. <input checked="" type="checkbox"/>	
				Regular <input checked="" type="checkbox"/> 48 Hr. <input type="checkbox"/>	
SAMPLE NUMBER	LOCATION DESCRIPTION	DATE	TIME	SAMPLE TYPE	TESTS REQUIRED
mw1- <b>a</b>	VOAS	12-20		<b>*</b>	EPA 8010
mw1-w <b>b</b>	500 mL Plastic				Hex. Chromium
mw1-w <b>c</b>	↓				Chromium & Cadmium
mw2- <b>a</b>	VOAS				EPA 8010
mw2-w <b>b</b>	500 mL Plastic				Hex. Chromium
mw2-w <b>c</b>	↓				Chromium & Cadmium
mw3- <b>a</b>	VOAS				EPA 800
mw3-w <b>b</b>	500 mL Plastic				Hex. Chromium
mw3-w <b>c</b>	↓				Chromium & Cadmium
Relinquished by: (Signature) <b>J. M.</b>		Received by: (Signature) <b>Mr. R. Varga</b>		Date/Time <b>2-20-99 10:27</b>	
Relinquished by: (Signature)		Received by Laboratory for analysis: (Signature)		Date/Time	
Special Instructions:					
DISTRIBUTION: White with report. Yellow to AL, Pink to Courier					